



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,793	03/30/2001	Sanghoon Lee	Lee 1-17	7445

7590 02/20/2004
Law Offices of Jean-Marc Zimmerman
226 St. Paul Street
Westfield, NJ 07090

EXAMINER

BRIER, JEFFERY A

ART UNIT	PAPER NUMBER
2672	19

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,793

Applicant(s)

LEE ET AL.

Examiner

Jeffery A Brier

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-25, 31-34, 36, 38 and 40-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-25, 31-34, 36, 38 and 40-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/31/03 has been entered.

Priority

2. On page 10 of the 12/31/03 response applicant claims priority to provisional Patent Application Serial No. 60/221316. A review of the papers in this file fails to show applicant made a claim under 35 U.S.C. 119(e) in this application prior to the filing of the 12/31/03 response.

3. The benefit claim filed on 12/31/03 was not entered because:

1) it is not proper since the appropriate claim in the first sentence of the description and the application data sheet is not present, see MPEP 201.11 which states:

B. Reference to Prior Provisional Applications

When the nonprovisional application is entitled to an earlier U.S. effective filing date of one or more provisional applications under 35 U.S.C. 119(e), a statement such as "This application claims the benefit of U.S. Provisional Application No. 60/---, filed ---, and U.S. Provisional Application No. 60/ ---, filed ---." should appear as the first sentence of the description or in an application data sheet. In addition, for an application which is claiming the benefit under 35 U.S.C. 120 of a prior application, which in turn claims the benefit of a provisional application under 35 U.S.C. 119(e), a suitable reference would read, "This application is a continuation of U.S. Application No. 08/---, filed ---, now abandoned, which claims the benefit of U.S. Provisional Application No. 60/---, filed --- ." Status of nonprovisional parent applications (whether it is patented or abandoned) should also be included. If a parent application has become a patent, the expression, "Patent No. __" should follow the filing date of the parent application. If a parent application has become abandoned, the expression "abandoned" should follow the filing date of

Art Unit: 2672

the parent application. In the case of design applications, it should appear as set forth in MPEP § 1504.20.

2) the required reference was not timely filed within the time period set forth in 37 CFR 1.78(a)(2) or (a)(5). If the application is an application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the reference to the prior application must be submitted during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. If the application is a nonprovisional application which entered the national stage from an international application filed on or after November 29, 2000, after compliance with 35 U.S.C. 371, the reference to the prior application must be made during the pendency of the application and within the later of four months from the date on which the national stage commenced under 35 U.S.C. 371(b) or (f) or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). If applicant desires priority under 35 U.S.C. 119e based upon a previously filed application, applicant must file a petition for an unintentionally delayed benefit claim under 37 CFR 1.78(a)(3) or (a)(6). The petition must be accompanied by: (1) the reference required by 35 U.S.C. 120 or 119(e) and 37 CFR 1.78(a)(2) or (a)(5) to the prior application (unless previously submitted); (2) a surcharge under 37 CFR 1.17(t); and (3) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) or (a)(5) and the date the claim was filed was unintentional. The Director may require additional information where there is a question whether the delay was unintentional. The petition should be addressed to: Mail Stop Petition, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Art Unit: 2672

See MPEP part V which states:

V. TIME PERIOD FOR MAKING A CLAIM FOR BENEFIT 37 CFR
1.78(a)(2) AND (a)(5))

The time period requirement under 37 CFR 1.78(a)(2) and (a)(5) is only applicable to utility or plant applications filed on or after November 29, 2000. The American Inventors Protection Act of 1999 (AIPA), Public Law 106-113, amended 35 U.S.C. 119 and 120 to provide that the Office may set a time period for the filing of benefit claims and establish procedures to accept an unintentionally delayed benefit claim. The Office has implemented these statutory changes, in part, by amending 37 CFR 1.78 to include: (A) a time period within which a benefit claim to a prior nonprovisional or provisional application must be stated or it is considered waived; and (B) provisions for the acceptance of the unintentionally delayed submission of a claim to the benefit of a prior nonprovisional or provisional application.

If the application is an application filed under 35 U.S.C. 111(a) on or after November 29, 2000, the benefit claim of the prior application must be made during the pendency of the application and within the later of four months from the actual filing date of the application or sixteen months from the filing date of the prior application. See 37 CFR 1.78(a)(2)(ii) and (a)(5)(ii). ** This time period is not extendable and a failure to submit the reference required by 35 U.S.C. 119(e) and/or 120, where applicable, within this time period is considered a waiver of any benefit of such prior application(s) under 35 U.S.C. 119(e), 120, 121 and 365(c).

If the reference required by 35 U.S.C. 120 and 37 CFR 1.78(a)(2) is not submitted within the required time period, a petition for an unintentionally delayed claim may be filed. The petition must be accompanied by: (A) the reference required by 35 U.S.C. 120 and 37 CFR 1.78(a)(2) to the prior application (unless previously submitted); (B) surcharge under 37 CFR 1.17(t); and (C) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(2) and the date the claim was filed was unintentional. The Commissioner may require additional information where there is a question whether the delay was unintentional. See 37 CFR 1.78(a)(3).

Likewise, if the reference required by 35 U.S.C. 119(e) and 37 CFR 1.78(a)(5) is not submitted within the required time period, a petition for an unintentionally delayed claim may be filed. The petition for an unintentionally delayed benefit claim must be submitted during the pendency of the nonprovisional application. The petition must be accompanied by: (A) the reference required by 35 U.S.C. 119(e) and 37 CFR 1.78(a)(5) to the prior provisional application (unless previously submitted); (B) a surcharge under 37 CFR 1.17(t); and (C) a statement that the entire delay between the date the claim was due under 37 CFR 1.78(a)(5) and the date the claim was filed was unintentional. The Commissioner may require additional information where there is a question whether the delay was unintentional. See 37 CFR 1.78(a)(6).

Petitions for an unintentionally delayed benefit claim should be forwarded to the Office of Petitions. See MPEP § 1002.02(b).

If a benefit claim is filed after the required time period and without a petition as required by 37 CFR 1.78(a)(3) or (a)(6), the applicant should be informed that the benefit claim was not entered and that a petition needs to be filed using form paragraph 2.39.

Response to Arguments

Applicant's arguments filed 12/31/03 have been fully considered but they are not persuasive. The affidavit has not been received, thus, the rejection based upon the

Art Unit: 2672

first Lee article is maintained and reproduced below. The claim for priority to the Provisional application is late, thus, the rejection based upon the second Lee article is maintained and reproduced below. Additionally the second Lee article has three authors while this application only lists two inventors, if three people developed the system described by the second Lee article then at least some of the claims were invented by three inventors. A change of inventorship or other action may be necessary to overcome this situation.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 20, 23, 24, 31, 33, 34, 36, 39, 40, and 43-45 are rejected under 35 U.S.C. 102(a) as being anticipated by the IEEE article by Sanghoon Lee, Chris Podilchuk, Vidhya Krishnan and Alan C. Bovik et al. titled Unequal Error Protection for Foveation-Based Error Resilience over Mobile Networks, 2000, IEEE, vol. 2, pgs. 140-143. The two inventors of this application are common to the authors of the article, however, since the article has four authors, this article meets the “by others” of 102(a).

Claim 20:

This article describes a method for partitioning a video image between a foveated area and a background area in section 2. at pages 140-141. The article describes

Art Unit: 2672

defining a foveation point in the video image and a foveated area in proximity to said foveation point in the abstract on page 140. Also described is extracting a first plurality of data signals from said video image representing the foveated area and extracting a second plurality of data signals from said video image representing a background area at page 140 second column second full paragraph lines 6-8. Encoding the extracted first plurality of data signals with a first error correction protocol to create a first encoded signal and encoding the extracted second plurality of data signals with a second error correction protocol different from the first error correction protocol to create a second encoded signal is described at page 140 second column second full paragraph lines 11-21. The Lee article does teach newly added claim limitations of two FEC algorithms, one for the foveated area and one for the non foveated area. See page 140 second column line 23-26 and section 3.3.

Claim 23:

This claim is described by the article at page 141 first column in the first full paragraph and in figure 4.

Claim 24:

This article does not explicitly describe packetizing the first encoded signal with inserted synchronization markers occurring after a first predetermined number of bits; and packetizing the second encoded signal with the inserted synchronization markers occurring after a second predetermined number of bits wherein the first number is smaller than the second number, however, this is inherent since packets have synchronization markers and since different error correction protocols are being used

with different levels of error correction the location of the synchronization markers in the different bit streams would be different.

Claim 31

This article describes wherein the first plurality of data signals comprises all pixel signals included in a high-resolution area of said video image at page 140 second full paragraph lines 9-11.

Claim 33:

The article describes the first error correction protocol comprises at least one of FEC (forward error correction) algorithms, ARQ (automatic repeat request) algorithms or error resiliency conforming to video communications industry standards H263++ and/or MPEG-4 at page 140 second column second full paragraph.

Claim 34:

The article describes the second error correction protocol comprises at least one of FEC (forward error correction) algorithms or error resiliency conforming to video communications industry standards H263++ and/or MPEG-4 at page 140 second column second full paragraph.

Claim 36:

The article describes this claim at page 141 in the paragraph preceding section 3.

Claim 39:

The hybrid ARQ using FEC described at page 141 in section 3.3 teaches this claim.

Claim 40:

The unequal delay-constrained ARQ described at page 141 in section 3.1 teaches this claim. The Lee article does teach the claim limitations of first and second error ARQ allowable error thresholds at section 3.1 since unequal delay is unequal error thresholds.

Claims 43 and 44:

These claims claim the same limitations that claims 23 and 24 claim. These claims are rejected for the same reasons given for claims 23 and 24 above.

Claim 45:

Claim 45 is a broader version of claim 20 and it is rejected for the reasons given for claim 20.

6. Claims 20-25, 31-34, 36, 38, 40-44 and 46 are rejected under 35 U.S.C. 102(a) as being anticipated by the IEEE article by Sanghoon Lee, Chris Podilchuk, and Alan C. Bovik et al. titled Foveation-Based Error Resilience for Video Transmission over mobile Networks, 2000, IEEE, vol. 10, pgs.1451-1454. The two inventors of this application are common to the authors of the article, however, since the article has three authors, this article meets the "by others" of 102(a).

Claim 20:

This article describes a method for partitioning a video image between a foveated area and a background area in section 1 at pages 1451. The article describes defining

Art Unit: 2672

a foveation point in the video image and a foveated area in proximity to said foveation point in the abstract on page 1451. Also described is extracting a first plurality of data signals from said video image representing the foveated area and extracting a second plurality of data signals from said video image representing a background area at page 1451 second column first full paragraph. Encoding the extracted first plurality of data signals with a first error correction protocol to create a first encoded signal and encoding the extracted second plurality of data signals with a second error correction protocol different from the first error correction protocol to create a second encoded signal is described at page 1451 second column second full paragraph. The Lee article does teach newly added claim limitations of two FEC algorithms, one for the foveated area and one for the non foveated area. See page 1453 first column lines 9-12 and column 2 first full paragraph. Here error resilience corresponds to the claimed FEC algorithm because errors in the bitstream are corrected rather than retransmitted.

Claims 21 and 22:

This article describes eye tracking to determine the foveation point at page 1451 second column first full paragraph.

Claim 23:

This article describes using the average local bandwidths in each macroblock to determine the foveation area and inherently macroblocks having a bandwidth above a threshold is in the foveation layer see page 1451 second column first full paragraph and page 1452 section 2.2 second paragraph.

Claim 24:

This claim is taught by the article on page 1452 section 2.5.

Claim 25:

Lines 1-13 of this claim are the same as lines 1-13 of claim 20, thus, the discussion of claim 20 applies to lines 1-13. Lines 14-19 is met by the packet priority at page 1452 second column line 5 of the second paragraph of section 2.4 and by section 2.4 as a whole along with section 2.3 as well as section 3 since unequal delay allows for unequal error correction.

Claim 31:

This article describes wherein the first plurality of data signals comprises all pixel signals included in a high-resolution area of said video image at page 1451 third full paragraph lines 1-5.

Claim 32:

This article describes wherein the first plurality of data signals comprises all pixel signals included in a high motion area of said video image at page 1451 second column lines 8-11 of the first paragraph of section 2.1. Related objects that the user will gaze to would inherently includes objects of motion since the eye detects motions and focuses on moving objects instinctively.

Claim 33:

The article describes the first error correction protocol comprises at least one of, ARQ (automatic repeat request) algorithms or error resiliency conforming to video

Art Unit: 2672

communications industry standards H263++ and/or MPEG-4 at page 1453 sections 2.3 and 3.

Claim 34:

The article describes the second error correction protocol comprises at least one error resiliency conforming to video communications industry standards H263++ and/or MPEG-4 at page 1453 sections 2.3 and 3.

Claim 36:

This claim is taught at page 1453 second paragraph of section 3.

Claim 38:

This claim is taught in section 4 at page 1453.

Claim 40:

This claim is taught in section 3 at page 1453. The second Lee article does teach first and second error ARQ allowable error thresholds since in section 3 unequal delay is unequal error thresholds.

Claims 41-44:

These claims claim the same limitations that claims 21 to 24 claim. These claims are rejected for the same reasons given for claims 21 to 24 above.

Claim 46:

Claim 46 is a broader version of claim 25 and it is rejected for the reasons given for claim 25.

Art Unit: 2672

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

T. H. Reeves, Adaptive Foveation of MPEG Video , February 1997, Proceedings of the fourth ACM international conference on Multimedia, pages 231-241 teaches applying different temporal resolution and spatial resolution to the foveated area and the background area.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A. Brier whose telephone number is (703) 305-4723. The examiner can normally be reached on M-F from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (703) 305-4713).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

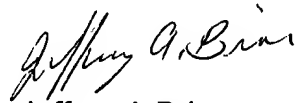
or faxed to:

(703) 872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Art Unit: 2672

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Jeffery A Brier
Primary Examiner
Art Unit 2672